

Amendment

U.S. Patent Application No. 09/689,279

1. (Amended) A rotating drum pressure differential filter comprising:

Ref. C1
A1
a drum rotatable about an axis of rotation, said drum including at least one wall having an inner surface that at least partially defines an inner chamber, and an outer surface, said wall including at least one opening for allowing the passage of fluid from outside the drum to said inner chamber;

a drive to rotate said drum about said axis of rotation;

a source of differential pressure to provide a lower pressure in said inner chamber than outside said drum;

a container for containing a sample medium having components to be separated, said container being positioned with respect to said drum such that, in operation, said drum is rotated about said axis of rotation and at least a portion of a layer of filter medium applied to the outside surface of said drum rotates within the container to contact a sample medium disposed within the container;

a scraper adapted to be positioned adjacent said drum for scraping a layer of filter medium from said drum; and

a filter medium applicator adapted to be positioned adjacent said drum between said scraper and said container and being operatively arranged to apply a layer of filter medium to said outer surface.

5. (Amended) A rotating drum pressure differential filter comprising:

Ref. C1
A2
a drum rotatable about an axis of rotation, said drum including at least one wall having an inner surface that at least partially defines an inner chamber, and an outer surface, said wall

Amendment
U.S. Patent Application No. 09/689,279

including at least one opening for allowing the passage of fluid from outside the drum to said inner chamber;

a drive to rotate said drum about said axis of rotation;

a source of differential pressure to provide a lower pressure in said inner chamber than outside said drum;

a container for containing a sample medium having components to be separated, said container being positioned with respect to said drum such that, in operation, said drum is rotated about said axis of rotation and at least a portion of a layer of filter medium applied to the outside surface of said drum rotates within the container to contact a sample medium disposed within the container;

a scraper adapted to be positioned adjacent said drum for scraping a layer of filter medium from said drum; and

an applicator adapted to be positioned adjacent said drum between said scraper and said container for directing a layer of filter medium toward said outer surface,

wherein said applicator comprises at least one nozzle, a pressurized gas conduit, a pressurized filter medium conduit, and a nozzle that combines pressurized gas from said pressurized gas conduit with pressurized filter medium from said pressurized filter medium conduit, to form a spray.

9. (Amended) The filter of claim 5, wherein filter medium is circulated through said pressurized filter medium conduit.